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SCHEMATIC SITE PLAN AND DESIGN ANALYSIS FOR SMOKY MOUNTAIN CAMPGROUND

CITY OF ROCKS NATIONAL RESERVE · IDAHO

August 1998

SCHEMATIC SITE PLAN AND DESIGN ANALYSIS FOR SMOKY MOUNTAIN CAMPGROUND

Introduction

This schematic design is prepared to provide a detailed description of the proposed campground and entrance road development at City of Rocks National Reserve (CIRO). This document provides a level of design detail necessary for pursuing compliance permits and agency approvals and will help guide future, more detailed design. This plan includes the preferred location for the entrance road, campground loop roads and one option for campsite arrangement.

Project Background

The Comprehensive Management Plan (CMP) for City of Rocks National Reserve identified a need for additional camping facilities outside of the Reserve. These facilities were planned to be placed on Bureau of Land Management (BLM) land outside of, but in close proximity to the Reserve boundary. The Idaho Department of Parks and Recreation (IDPR) wishes to implement this component of the CMP and is now in the early stages of project design.

As a part of the design and development of this site, and in keeping with the cooperative management mandate for CIRO, IDPR has sought BLM and National Park Service (NPS) input into the design and development process. The BLM is a key partner because they own the land where the proposed campground will be built. The NPS and IDPR are partners in the management of CIRO and share the responsibility of providing a high quality experience for all visitors to the Reserve. In order for IDPR to proceed with more detailed design and construction of facilities they must first have concurrence from BLM and the NPS that this development is appropriate.

Once the partner agencies agree on a development proposal, IDPR must apply for a lease permit through BLM. BLM will then prepare an environmental assessment to analyze the impacts of constructing the new facilities. To help initiate the permitting process the NPS is providing design assistance and has produced this schematic site plan. This plan was prepared in cooperation with both BLM and IDPR.

On June 1 and 2, 1998, representatives from the three agencies met on-site to discuss their vision and goals for the project and determine how those ideas could be fit to the site.

Agency Representatives:

BLM- Karl Simonson

NPS- Kieth Dunbar, Dianne Croal and Mark Pritchett

IDPR- Merle Mews, James Thomas, Ned Jackson

Our task for the week was to come to agreement on:

- the development program

- site constraints
- concerns about road construction and potential site impacts

The group spent time walking the site together and staked a preliminary/rough campground and road layout based on field observations. That field work was recorded and used to develop the attached site plan.

Project Program

The CMP for CIRO proposed construction of "up to" 100 new camp sites outside of the Reserve boundary and identified a parcel on BLM land as the location for the campground. The majority of these sites will be for RV use and have electric and water hookups. A new access road will be constructed to the campground which will also serve as an entrance road for a future visitor center.

Development Goals

The primary goal for this development is to balance the desire to build up to 100 campsites with building only as many sites as the land can comfortably accommodate. The new development should lay lightly on the land by conserving existing landform and vegetation.

Development Criteria

The open and expansive nature of this broad valley offers grand distant views. This characteristic is an asset for viewing nature but can also make constructed elements obvious from many miles away. Building a campground and road that are RV friendly involves special design criteria that include large turning radii for maneuvering through the site and level parking spurs for safe use of the RV. The challenge of building a campground to these standards, on a sloping site is to avoid or at least minimize the potentially significant visual impacts that grading and clearing of vegetation can cause.

Care must be taken to construct the entrance road and campground in a sensitive way so they are not overly apparent to the residents and visitors of this valley. The following criteria were established to help minimize impacts of the proposed development.

- Vehicle Access- in order to limit the impacts of grading the site, the maximum grade restrictions should be increased up to 10% (for short distances). This will help to keep the proposed entrance road closer to existing grade and reduce the amount of large cuts and fills.
- Road Alignment- In order to obscure the proposed road from view and reduce the visual impact of the entrance road the alignment of the road should be curvilinear.
- Reclamation- Former land disturbances should be incorporated into the new development when possible and obliterated and revegetated when no longer needed. This includes portions of the existing linear road up to the BLM tree cutting area and the area disturbed during construction of the new water line.
- Density- The campground density should be established by respecting what the site will allow. This plan shows a "potential" arrangement of campsites. The critical part of developing a campground is field work. Typical sites were

designed and located on paper but they must be adjusted in the field prior to construction.

Proposal

Entrance Road

The basis for the proposed road alignment came from early design work done by IDPR. The horizontal alignment of the entrance road as proposed, remains similar to the earlier alignment developed by IDPR. The change in horizontal alignment involves reducing the dip to the south near the well and pump house and modifying the end of the road to enter the upper campground loop. The change in vertical profile of the road has also been modified to more closely follow existing ground from station 40+00 to the terminus near the entrance of the Pinon Loop.

Campground

Since this campground will be constructed with funds collected from sale of state RV licenses the design emphasis is to provide for the spatial requirements of RV's and include sites with water and electrical hookups. While the majority of the camp sites are RV sites, smaller sites for tent use were also included to provide a range of camping opportunities.

A range of site configurations were also developed for this project. These typical sites can be adjusted to fit the many situations that will be encountered during final layout. To avoid monotony and create a campground that fits it's site, these sites should not be uniformly spaced and they should vary in size. Each site should be located and field adjusted to take advantage of existing terrain and vegetation.

The design team staked out two areas on site using the dimensions 250' wide by 1200' deep as a guide. The terrain for the lower loop (Juniper Loop) accommodated these dimensions and based on preliminary layout, can support 44 camp sites. The upper loop (Pinon Loop) was constrained by a natural drainage area at the south end of the loop which consequently, resulted in a shorter loop and only 32 campground sites.

An option for using an existing road bed at the eastern edge of the BLM site was developed to increase the number of camp sites available and provide an alternative to the RV camping experience. This area referred to as the Sage Spur, is designed for tent use only and includes a large area for group use. The Sage Spur will not have individual utility hookups but will have access by trail to restrooms in the loop areas and have potable water spigots in convenient locations.

The Sage Spur road is located adjacent to a geologic feature known as a Fault Scarp. The design team was advised not to construct any camp sites directly on this scarp and in response, located all tent sites on this spur road away from this feature. Consideration of the potential effects of building near the Fault Scarp should be evaluated further prior to actually constructing any camp sites on the Sage Spur.

Restrooms

Based on the number of camp sites one restroom building would be adequate to handle the anticipated usage. However, based on the diffused placement of campsites, a minimum of two restroom buildings is necessary for convenience of access and to limit short-cutting and development of social paths.

These facilities will house showers and toilets, and could possibly utilize a combination composting system for human waste and drip irrigation system for gray water that would minimize the need for large leach fields. Small parking lots are positioned near each restroom building to accommodate drive up use. These parking areas also provide added capacity for overflow parking if needed.

Amphitheater

The amphitheater site was not definitively located during our field work. The area northwest of the campground is the most promising location for this facility. However, more site reconnaissance is needed to determine the best location for the Amphitheater. Parking for the amphitheater has been placed near the entrance of the Juniper loop. Parking here serves several functions: it gives visitors to the amphitheater that are not staying in the campground a convenient place to park, it provides drive up access to the restroom for visitors that wish to only use the showers and provides access to the restrooms for hunters and other users of BLM land during times that the campground may be closed.

Campground Expansion

Expanding the campground to increase capacity in the future could be done in the area west of the Pinon Loop and south of the Sage Spur group camp area. The area near Pinon Loop is constrained by steeper slopes and rougher terrain but could probably accommodate walk-in tent camping. The area south of Sage Spur is favorable for tent site development and additional sites could be placed here as well.

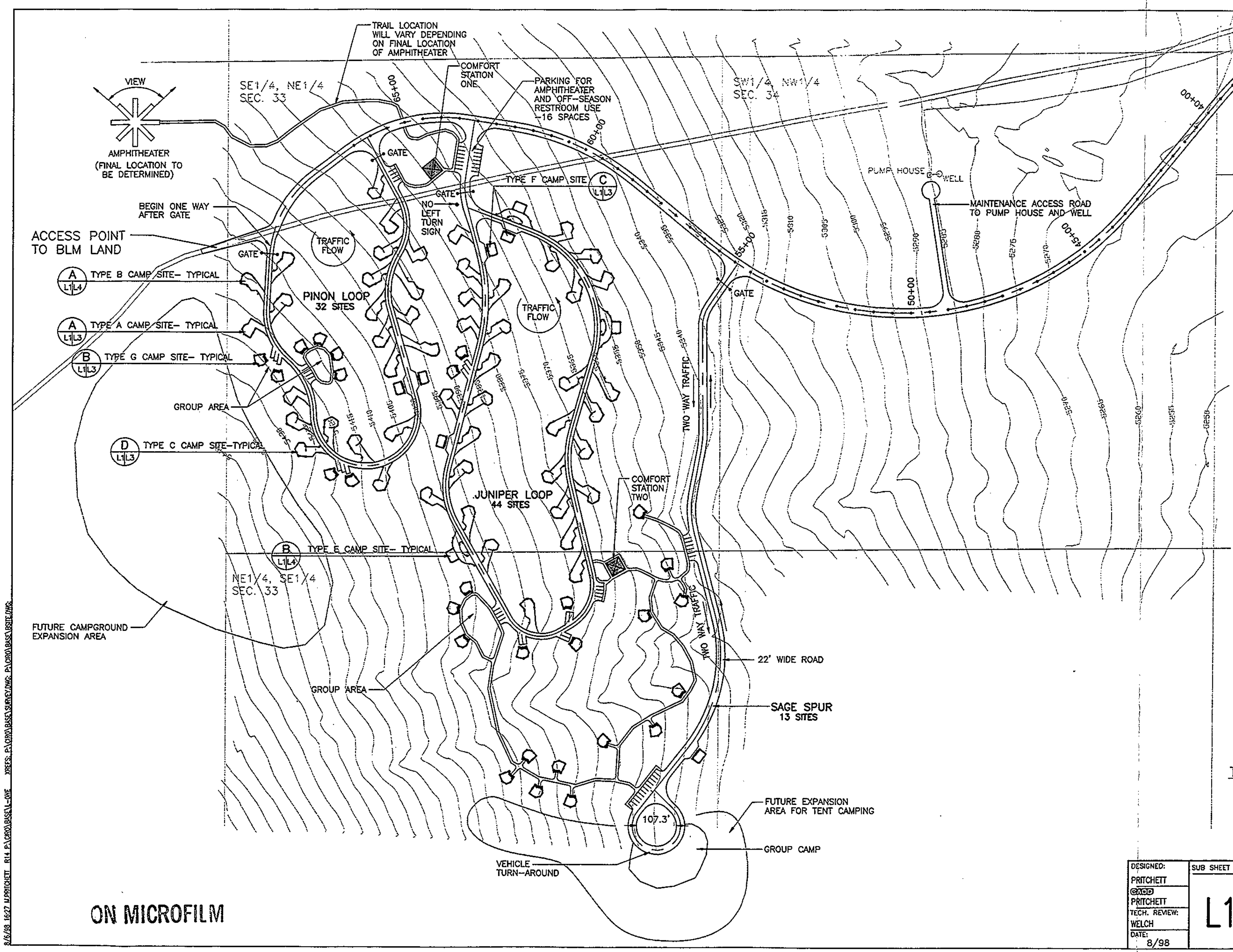
Conclusion

The initial concern over this project focused on early design of the entrance road. The early alignment alternative involved a significant amount of cut and fill which raised concerns over the potential environmental and visual impacts of that design. To address this concern the vertical profile of the entrance road has been adjusted to reduce the volume of cut and fill. The curvilinear horizontal alignment has been retained because it will provide a pleasant entry experience for campground users, and will help disguise the full extent of the roadway from distant viewpoints.

The campground capacity as designed, is now 89-units (55 RV and 34 tent sites) and includes two loop roads and one spur. The final number and location of camp sites will be determined by field layout.

The guiding principle for final layout of the campground loops and individual sites should be to preserve the existing vegetation and limit grading to the extent possible. This schematic design shows what development is possible for this site on paper. Refinements will need to be made in the field to insure that the new campground fits the site and is as undetectable as possible from the valley below. Some portions of this new facility will inevitably be visible from the valley,

but by preserving the mature natural vegetation and limiting cut and fill the visual impact of this campground can be minimized.



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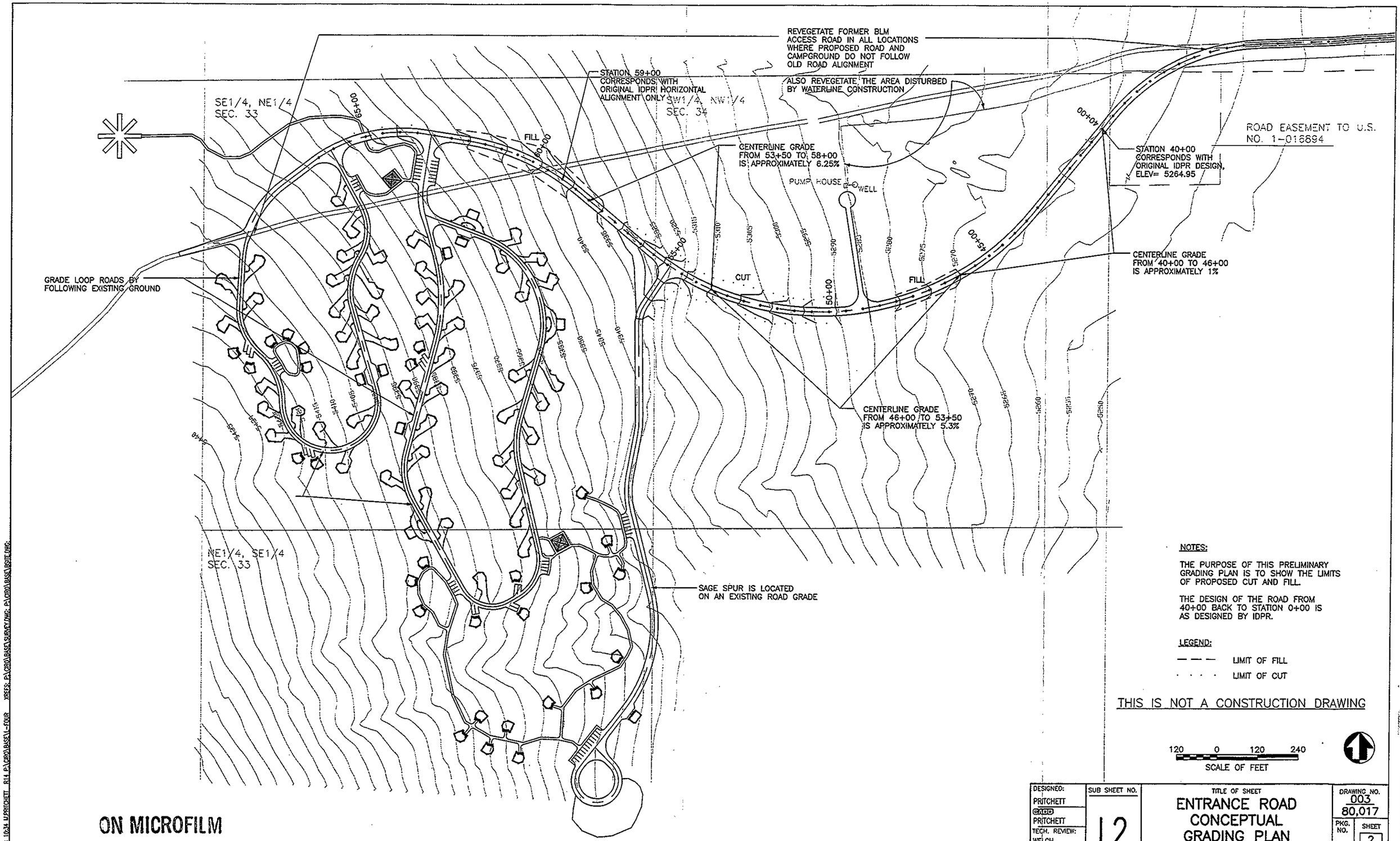
NOTES

1. INDIVIDUAL CAMP SITES ARE SHOWN AS A GUIDE FOR DETERMINING THE DEVELOPMENT CAPACITY OF THE OVERALL SITE. THE ACTUAL LOCATIONS OF INDIVIDUAL SITES MUST BE FIELD ADJUSTED. THE TOTAL NUMBER AND CONFIGURATION OF SITES WILL ALSO VARY DEPENDING ON FIELD CONDITIONS.
2. WATER AND ELECTRICAL HOOK-UPS ARE PROPOSED FOR EACH SITE.

THIS IS NOT A CONSTRUCTION DRAWING

120 0 120 240
SCALE OF FEET

DESIGNED: PRITCHETT CADD: PRITCHETT TECH. REVIEW: WELCH DATE: 8/98	SUB SHEET NO. L1	TITLE OF SHEET CAMPGROUND SITE PLAN PINON & JUNIPER LOOPS AND SAGE SPUR CITY OF ROCKS NATIONAL RESERVE	DRAWING NO. 003 80,017 PKG. NO. SHEET 1 OF 4



NOTES:

THE PURPOSE OF THIS PRELIMINARY GRADING PLAN IS TO SHOW THE LIMITS OF PROPOSED CUT AND FILL.

THE DESIGN OF THE ROAD FROM 40+00 BACK TO STATION 0+00 IS AS DESIGNED BY IDPR.

LEGEND:

— — — LIMIT OF FILL

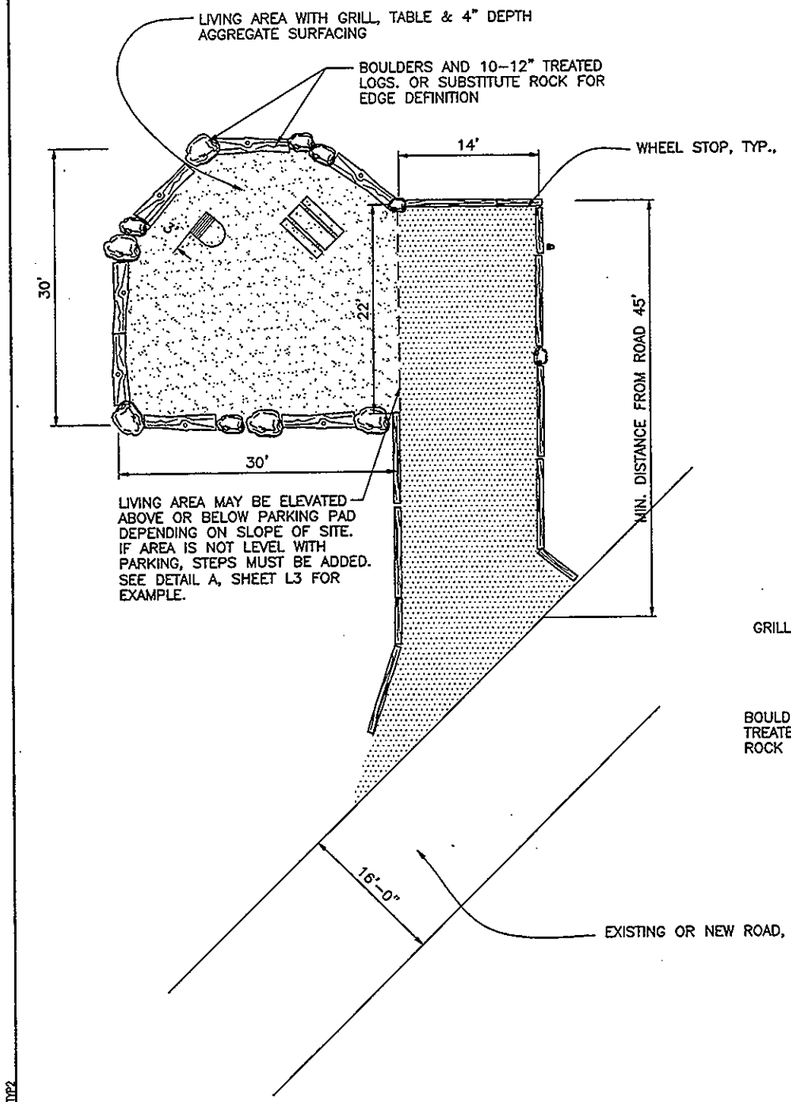
· · · · LIMIT OF CUT

THIS IS NOT A CONSTRUCTION DRAWING

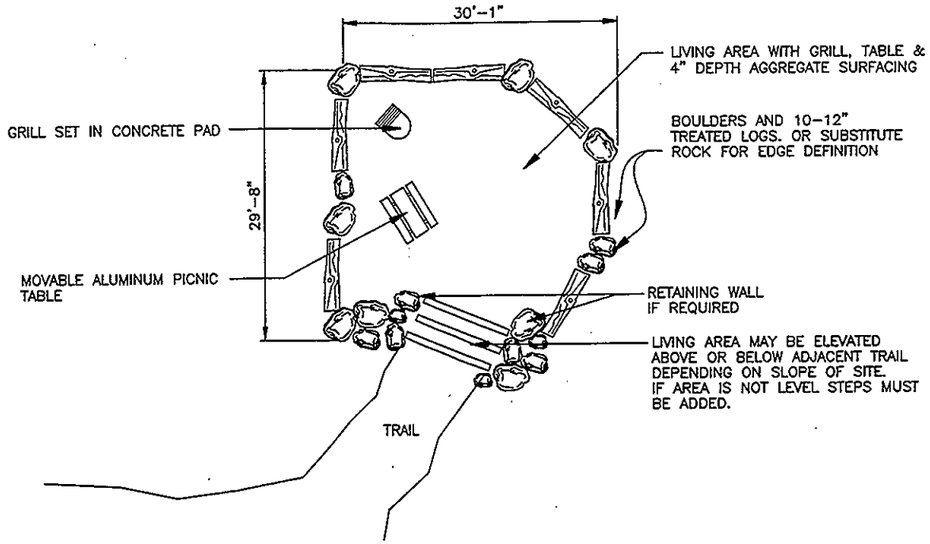
120 0 120 240
SCALE OF FEET

DESIGNED: PRITCHETT DRAWN: PRITCHETT TECH. REVIEW: WELCH DATE: 8/98	SUB SHEET NO. L2	TITLE OF SHEET ENTRANCE ROAD CONCEPTUAL GRADING PLAN CITY OF ROCKS NATIONAL RESERVE	DRAWING NO. 003 80,017 PKG. NO. — SHEET 2 OF 4

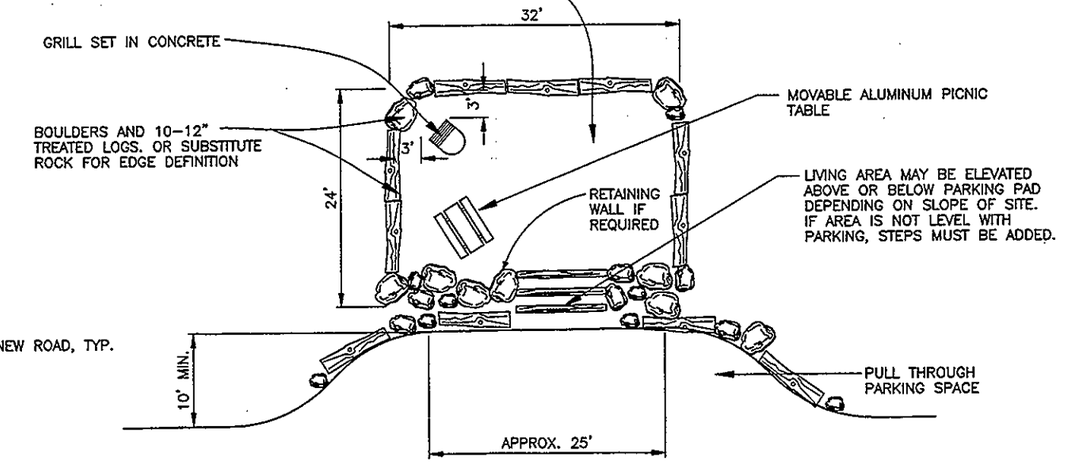
ON MICROFILM



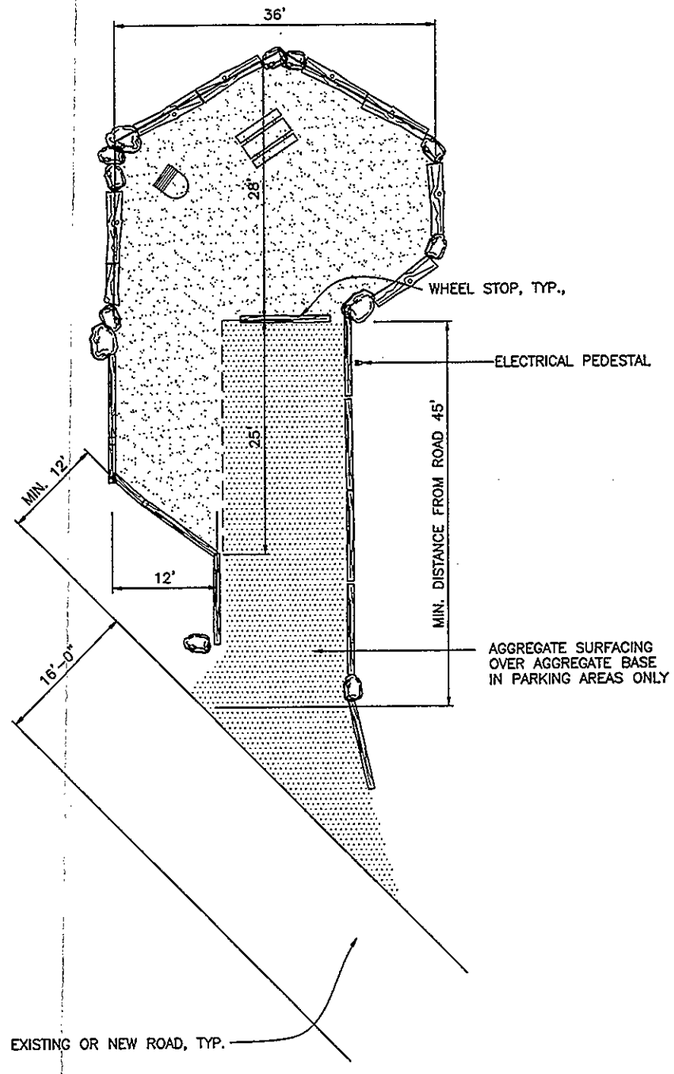
A L1|L3 BACK–IN SITE, TYPE A (SHORT SITE)
SCALE (A)



B L1|L3 TYPE G– WALK IN TENT CAMP
SCALE (A)



C L1|L3 TYPE F– PULL THROUGH TENT CAMP
SCALE (A)



D L1|L3 BACK–IN SITE, TYPE C
SCALE (A)

SCALE (A) 8 0 8 16
SCALE OF FEET

ON MICROFILM

DESIGNED: DSC DRAFTED: DSC TECH. REVIEW: PRITCHETT DATE: 8/98	SUB SHEET NO. L3	TITLE OF SHEET TYPICAL CAMP SITE LAYOUTS CITY OF ROCKS NATIONAL RESERVE	DRAWING NO. 003 80,017 PKG. NO. — SHEET 3 OF 4

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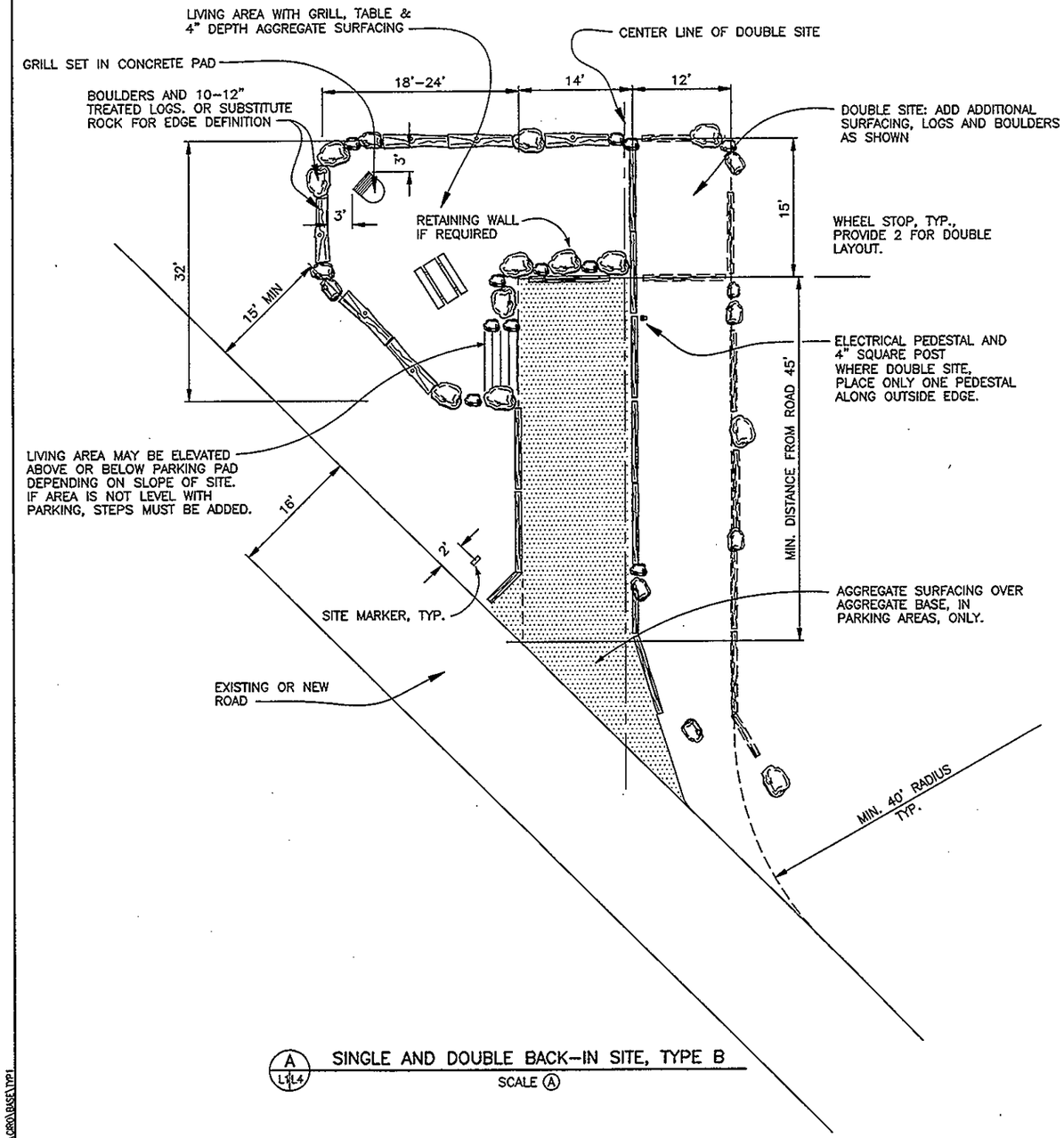
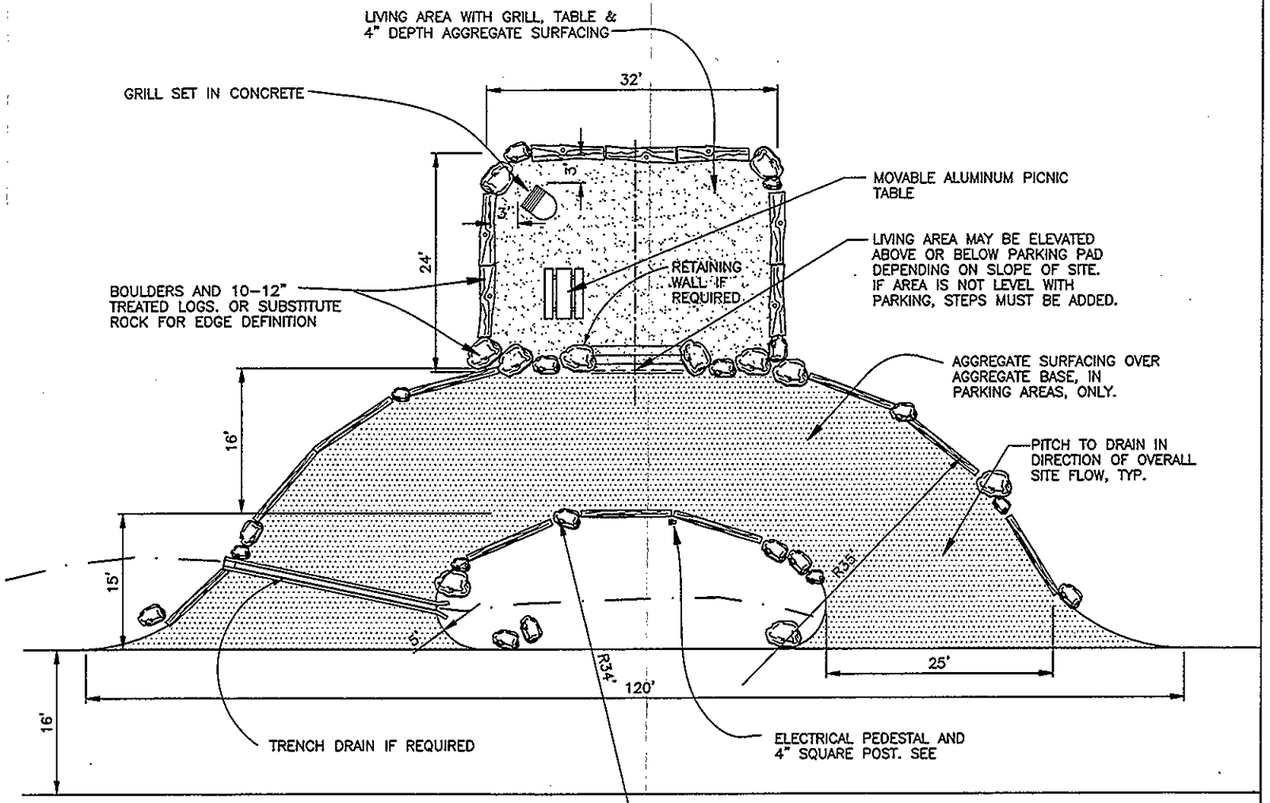


A L1L4 SINGLE AND DOUBLE BACK-IN SITE, TYPE B
SCALE A



B L1L4 PULL THROUGH SITE- TYPE E
SCALE A

SCALE A 8 0 8 16
SCALE OF FEET

DESIGNED: DSC DRAWN: DSC TECH. REVIEW: PRITCHETT DATE: 8/98	SUB SHEET NO. L4	TITLE OF SHEET TYPICAL CAMP SITE LAYOUTS CITY OF ROCKS NATIONAL RESERVE	DRAWING NO. 003 80,017 PKG. NO. ___ ___ ___ SHEET 4 OF 4

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